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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,527	09/05/2003	Mark W. Waldrop	937-1499	8768

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NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER	
CARRILLO, BIBI SHARIDAN	
ART UNIT	**PAPER NUMBER**
1746	

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/656,527	WALDROP ET AL.	
	Examiner	Art Unit	
	Sharidan Carrillo	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-11,13-24,36 and 37* is/are pending in the application.

4a) Of the above claim(s) *3,6 and 7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,9-11,13-24,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-7,9-11,13-24,36 and 37* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. The Bib Data Sheet needs to be amended because it recites an incorrect filing date of 9/6/2002 for provisional application 60/408604. According to the declaration, the filing date of the provisional application is 9/5/2002. Correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2, 4, 10, 13-23 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fusiak (5049300) in view of Sullivan (5232515) and further in view of Machac Jr. et al. (US2002/0198124).

Fusiak teaches a method of removing paint from wood and metal using acidified NMP (abstract, col. 2, lines 30-35). In reference to the pH adjuster, Fusiak teaches that NMP is acidified with an inorganic or organic acid having a pKa of less than 4.0. Fusiak fails to teach removing paint from plastic parts. Sullivan teaches removing paint from plastic parts (i.e. for use in automotive applications) using a composition comprising NMP (col. 1, lines 5-10, col. 4, lines 5-39). Sullivan further teaches removing paint from wood and metal.

It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include stripping paint from plastic parts, as taught by Sullivan, since both Fusiak and Sullivan teaches using NMP for stripping paint.

Fusiak in view of Sullivan fails to teach ultrasonic energy or the surfactant recited in claim 37 . Machac Jr. et al. teach stripping paint from automotive body parts using NMP (paragraphs 2 and 12) at an elevated temperature (paragraph 4) and with the use of sonication (paragraph 25). In paragraphs 19 and 22, Machac teaches surfactants including ethoxylated alcohols which are commonly used in paint removal. It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include ultrasonic energy as taught by Machac, for purposes of enhancing the

removal of paint from the substrate surface. It would have been obvious to a person of ordinary skill in the art to modify the surfactant of Fusiak to include conventional surfactants, such as ethoxylated alcohols, as taught by Machac, for purposes of enhancing paint removal.

In reference to claims 2 and 14, refer to col. 2, lines 29-31 of Fusiak. In reference to claims 4 and 13-14, Fusiak teaches NMP and a mineral acid such as sulfuric or phosphoric acid. In reference to claim 10, refer to the teachings of Fusiak. In reference to claims 15-16, Fusiak teaches sulfuric acid, but fails to teach hydrochloric acid. Examples given include phosphoric acid and sulfuric acid. Since both hydrochloric acid and sulfuric acid have pKa values of less than 4, it would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to substitute HCl for sulfuric acid since both HCl and sulfuric acid are mineral acids and have pKa values of less than 4. In reference to claim 17, Fusiak in view of Sullivan and Machac fail to teach the desired ultrasonic frequency. However, it would have been within the level of the skilled artisan to have adjusted the frequency depending upon the amount and contaminants present on the substrate surface. In reference to claims 18-19, Fusiak in view of Sullivan teaches using elevated temperatures to remove the paint. Machac teaches paint stripping at temperatures from 45-75 degrees centigrade. Machac further teaches that temperature conditions may vary (paragraph 25). It would have been obvious to a person of ordinary skill in the art to modify the method of Fusiak to include heating at elevated temperatures, as taught by Machac, for purposes of enhancing paint removal from the substrate surface. Additionally, the use of

ultrasonics to enhance contaminants and/or paint removal is notoriously well known in the art as evidenced by Bivins et al. 6511546, Muraoka et al. 6696228, and Freij 4906303.

In reference to claims 20 and 22, it would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include nylon and styrene since Fusiak in view of Sullivan teaches cleaning plastics and nylon and styrene are types of plastic materials. In reference to claim 21, refer to col. 4, lines 7-9 of Sullivan. In reference to claim 23, Machac teaches application times of between 1 minute and 1 hour (paragraph 26). In reference to rinsing and drying refer to col. 4, lines 55-60 and claim 9 of Sullivan. In reference to claim 36, Fusiak teaches NMP, surfactant and mineral acids.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leon et al. (3338756) and further in view of Machac Jr. et al. (US2002/0198124).

Leon teaches a method of removing paint from plastic substrates using a composition comprising dimethylacetamide or dimethyl sulfoxide and phosphoric acid (col. 6, lines 30-40, col. 1, lines 15-17). Leon fails to teach hydrochloric acid. However, it would have been obvious and within the level of the skilled artisan to substitute phosphoric acid for equivalent hydrochloric acid since both acids are considered as mineral acids. Leon teach the invention substantially as claimed with the exception of ultrasonic energy. Machac Jr. et al. teach stripping paint from automotive body parts using NMP, DMSO (paragraphs 27 and 14) at an elevated temperature (paragraph 4) and with the use of sonication (paragraph 25). It would have been obvious and within

the level of the skilled artisan to have modified the method of Leon to include ultrasonic energy as taught by Machac, for purposes of enhancing the removal of paint from the substrate surface. Additionally, the use of ultrasonics to enhance contaminants and/or paint removal is notoriously well known in the art as evidenced by Bivins et al. 6511546, Muraoka et al. 6696228, and Freij 4906303.

6. Claims 9, 11, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fusiak (5049300) in view of Sullivan (5232515 and Machac (US2002/0198124), as applied to claims 1-2, 4, 10, 13-23 and 36-37, as described in paragraph 4 above, and further in view of L'ohr e al. (5578135).

Fusiak in view of Sullivan and Machac fail to teach the limitations of claim 9. L'ohr teaches stripping the paint from plastic automotive parts using an organic solvent followed by treatment with the solvent in which stirring and thermal and mechanical energy are supplied to the part in order to remove the paint from the plastic part. L'ohr teaches comminution of the part in order to treat bulky plastic pieces. It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include comminution as well as stirring, as taught by L'ohr, for purposes of effectively removing paint from the part and in order to treat bulky plastic pieces.

Fusiak in view of Sullivan teaches using elevated temperatures for paint stripping. In reference to claim 24, L'ohr teaches treating the plastic chips at elevated temperatures of 80-100 degrees centigrade for 15 minutes (abstract, col. 5, lines 45-48). It would have been obvious to a person of ordinary skill in the art to have modified the method of Fusiak to include elevated temperatures, as taught by L'ohr, for purposes

of enhancing paint removal. In reference to step d of claim 24, L'ohr teaches filtering out the paint particles and flushing the plastic chips with water and further teaches drying the chips (col. 5, lines 5-27, and col. 6, lines 12-15). It would have been obvious and within the level of the skilled artisan to modify the method of Fusiak to include separating the paint and rinsing and drying the plastic chips, as taught by L'ohr, since such steps are conventional in the recycling and reclamation of plastic parts.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Freij teaches removing paint with NMP in combination with ultrasonics.

Response to Arguments

8. This application contains claims 3, and 6-7 drawn to an invention nonelected with traverse in Office Action of 5/4/2005. Claims 6-7 have been "currently amended", however, these claims should be withdrawn based on the restriction election of 10/4/2005.

9. The rejection of the claims, under 112, second paragraph, is withdrawn in view of corrections made by applicant.

10. The rejections of the claims as being unpatentable over Fusiak in view of Sullivan, Fusiak in view of Sullivan and further in view of Lohr, and Leon et al. are withdrawn in view of the newly amended claims.

11. Applicant argues that the claims are allowable because the rejection of the claims over Machac, Jr. et al. should be withdrawn in view of the submission of the 131 Declaration stating that the present invention was made in this country prior to the filing

date of the Machac reference. Applicant further submits Exhibit A, Laboratory Notebook which is directed to the removal of paint from a part with 25kHz and a formulation of 90%NMP/10%HCl. Applicant's arguments are unpersuasive for the following reasons. The Declaration is not commensurate with the scope of the claims. The claims include a Markush group selected from the group consisting of pyrrolidone compounds, piperidone compounds and imidazolidinone. Independent claim 5 is directed to dimehtylsulfoxide, dimethylacetamide, and dimethylformamide and a terpene. However, the declaration is only directed to NMP, it is not directed to other species of pyrrolidone recited in claim 1 for example, or the other genus of piperidone and imidazolidinone including the compounds recited in claim 5. Additionally, the claims do not recite the ultrasonic frequency of 25 kHz or HCl, as shown in the declaration. Additionally, the use of ultrasonics to enhance contaminants and/or paint removal is notoriously well known in the art as evidenced by Bivins et al. 6511546, Muraoka et al. 6696228, and Freij 4906303.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on M-W 6:30-4:00pm, alternating Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc

SHARIDAN CARRILLO
PRIMARY EXAMINER